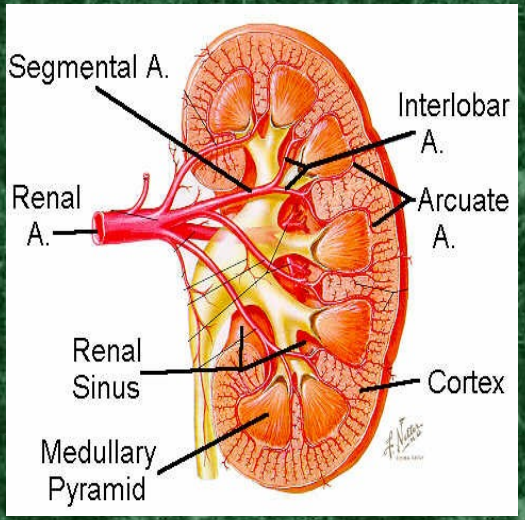
Renal Rotation

2LT Olson

CPT McMillan

21 Dec 00



Access - Types

- Catheter
  - External connections
  - Needle insertion not necessary
  - Temporary
  - Greater risk of infection
  - Immediate access
- Shunt
  - Internal connections
  - Needle insertion after placement
  - More permanent
  - Less risk of infection
  - Cannot use immediately
  - May be placed & not used for years

Catheter

- Femoral
  - Tube into femoral artery
  - Very short term
  - Immobile pts

Catheter

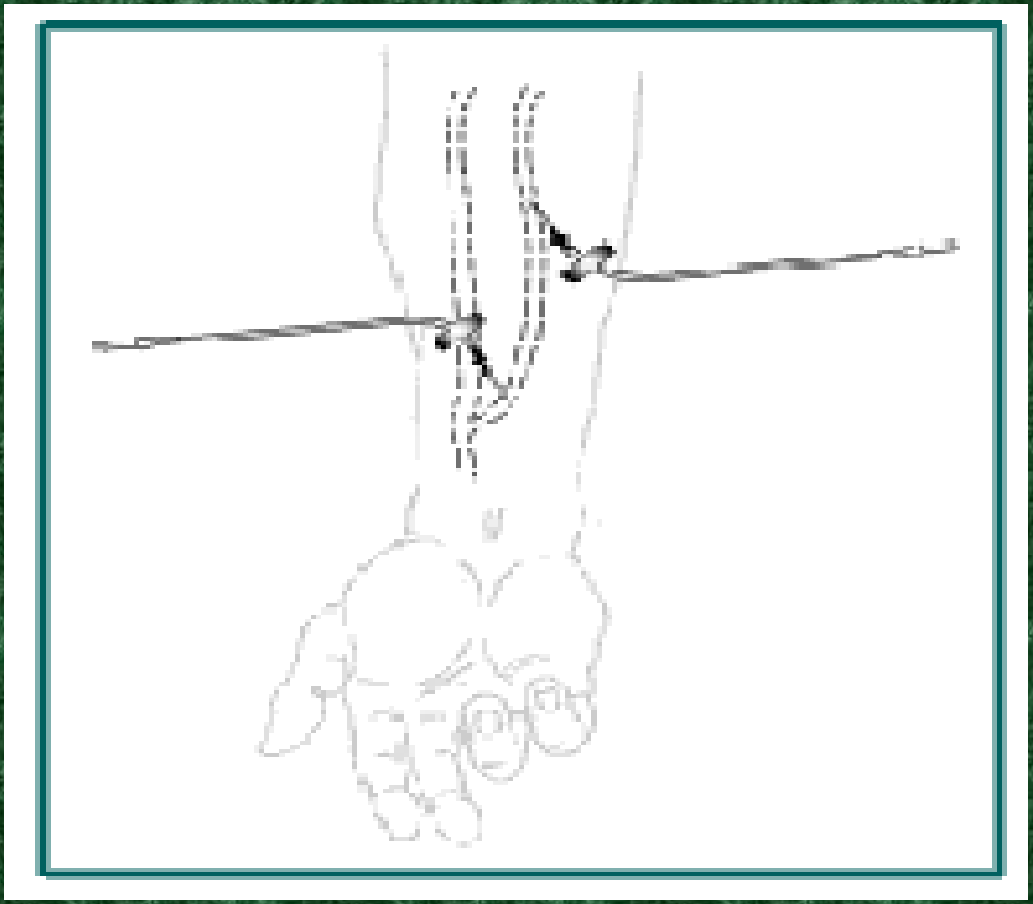
- Intrajugular Tube
  - Tube into jugular vein
  - Mobile pts
  - Emergency situations
  - High risk of infection

IJ Tube

Shunts

- Arteriovenous Fistula
  - Native Pathway
  - Connects an artery and a vein
  - Best method
  - Not for everyone
  - Surgically placed
  - Require a build up period before use
  - Lasts for years

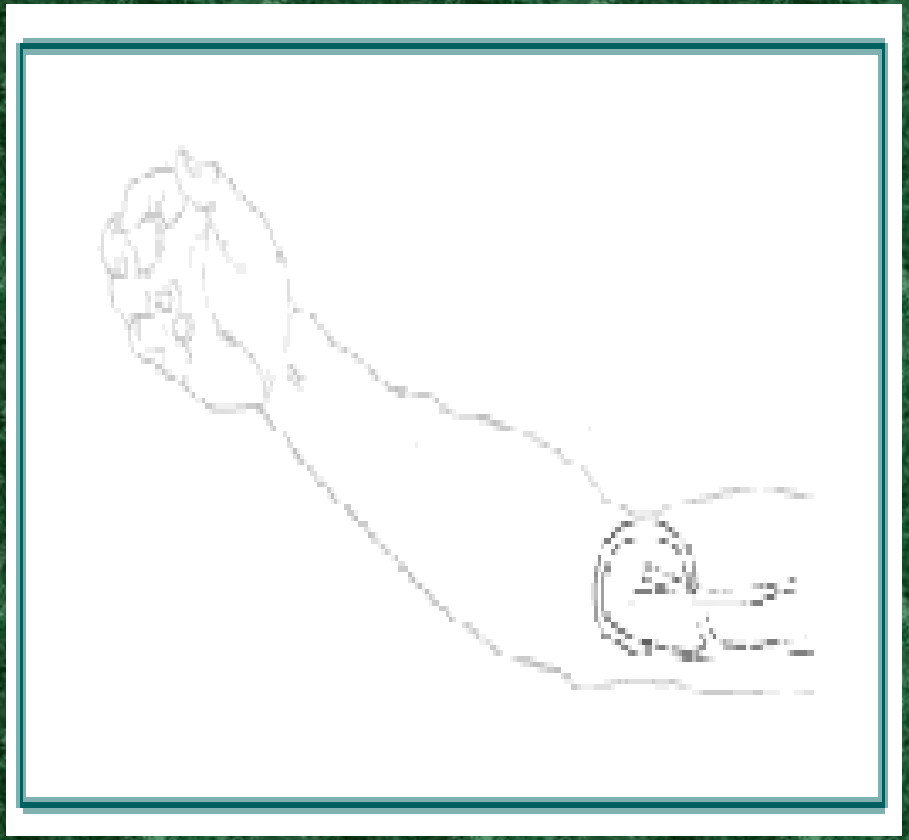
AV Fistula



Shunts

- Gortex Graft
  - Loop connecting vein to artery using a gortex tubing
  - Provides geography for needle sticks
  - Anyone can have
  - No exercising
  - Use almost immediately
  - Not as durable
  - More intervention to maintain

Graft



Problems

- Clot
- Stenosis
- Infection

Treatment

- Identify problem immediately
- Check Machine/Try another place
- Drugs
- Angioplasty
- Surgery

Pre-Dialysis Access Checks

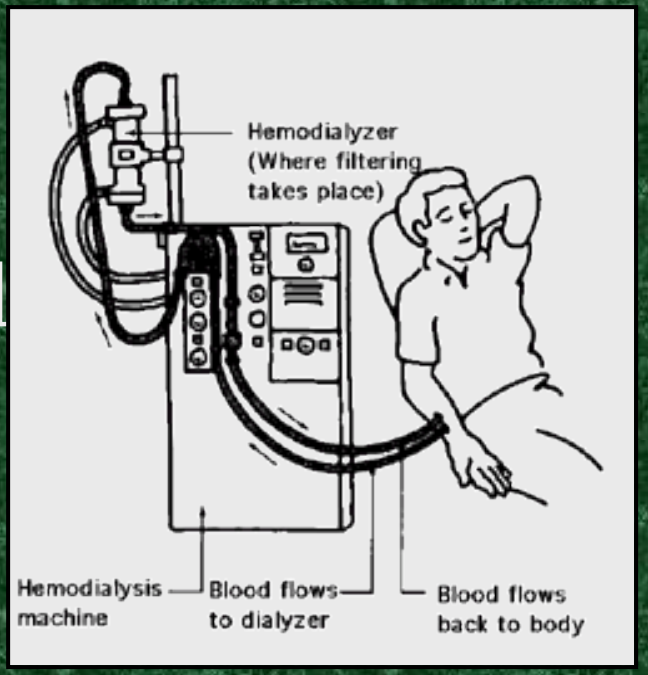
- Type
- Location
- Thrill
- Bruit
- Redness, Swelling, and Pain

My Patient's Access Issues

- Started with a gortex graft
- Experienced narrowing of veins; poor blood flow
- Balloon operation
- New connection

PT - EB

- ESRD – unknown etiol
- PMH: n/a
- Single
- Retired Army
- Current Tx: Dialysis 3X week (5/10/99)
- No psychosocial issues



Diet History

- B-fast: 3 slices bread & ½ c juice/water
- Lunch: Microwave Meals & ½ c water
- Dinner: Microwave Meals & ½ c water
- HS: fruit
- No salt/salt sub used
- Sometimes uses Sweet-n-Lo in tea
- Eats out 4 X month

Physical Exam

- 67 YOAAM
- Ht: 6’1”
- Med Frame
- Dry Wt: 85.5 kg
- UBW: 85.5 kg (100%)
- DBW: 75-91 kg (100%)

Physical Exam

- Avg. Inter Dialytic Weight Gain (IDWG): 4.65 kg
- Urine output: Minimal
- No gi problems
- Exercises TIW

Labs

Lab	Normal Range	HD	Value
K	3.6 - 5.0 mmol/L		5.3
BUN	9-22 mg/dL	40-80	55
Cr	0.8-1.5 mg/dL		12.6
Alb	3.5-5.0 g/dL	>4.0	4.2
Ca	8.4-10.2 mg/dL		9.9
P	2.5-4.5 mg/dL		4.3
PTH	12-72 pg/mL		112

Meds

Medication	Classification	Drug/Nutrient Interactions
Oscal	P Binder	Inc Ca, Dec P
Lopressor	Antihypertensive	
Colace	Stool Softener	
NephroCaps	Vit. Replacement	
Rocaltrol	Vit D	Dec PTH

Estimated Nutrient Needs

- Kcal: 2992 (35 kcal/kg)
- Pro: 103 – 120 g (1.2-1.4 g/kg)
  - HBV: 67-78 g (65% of g)
- K: <3 g (40 mg/kg, not to >3 g)
- P: 1026-1453 mg (<12-17 mg/kg)
- Na: 2 g (standard)
- Fluids: 4 x 8 oz glasses (1 L + urinary output)

Recommended Nutrient Needs

- Kcal: 1800-2000 kcal diet
- Pro: 103 g
- K: <3 g
- P: 1026 mg
- Na: 2 g
- Fluid: 4 x 8 oz glasses

Nutrition Diagnostic Statement

- Pt is not at nutritional risk. Pt is 100% DBW and UBW. Pts appetite and po intake of kcal and protein are sub optimal, but very regular and not resulting in variances or deficiencies in labs, except for a seasonal high K. Pt exercises regularly and is concerned about his health. Pt's IDWG average is above the 3 kg recommended level and has been for several months now. Pt exhibits an overall good quality of life and appears adequately nourished.

Recommendations

- None at this time because:
  - Pt is doing good and exhibits a good quality of life.
  - Albumin is 4.2
  - Doctors have him on Nephro-Caps
  - Majority of labs are WNL

Plan

- Talk to pt about the elevated K level and what foods are high in K, so the pt can limit these foods.

Goal

- Bring K down WNL
- Keep pt in good nutritional status

Outcomes of Care

- Decrease further complications of pt by normalizing lab values effected from diet and keeping pt in good nutritional status.

Questions ?????